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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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John R. Jacobson

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3M INNOVATIVE PROPERTIES COMPANY

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EXAMINER

EDWARDS, LAURA ESTELLE

ART UNIT

PAPER NUMBER

1792

NOTIFICATION DATE

DELIVERY MODE

03/20/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/808,584	Applicant(s) JACOBSON ET AL.	
	Examiner Laura Edwards	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 57-75 is/are pending in the application.
- 4a) Of the above claim(s) 62-75 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 19, 20, 22-24, 29-35 and 57-60 is/are rejected.
- 7) ☒ Claim(s) 10-18, 21, 25-28 and 61 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 1/8/09 has been entered.

Election/Restrictions

Newly submitted claims 62-75 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: new method claims are withdrawn from consideration as Applicant originally elected (see office action as of 7/8/02) apparatus claims, without traverse, for examination such that the filing of the RCE would not necessarily allow for a shift to consideration of another invention.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 62-75 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) as well as MPEP § 819 and 821.03.

Withdrawn Allowable Subject Matter

The indicated allowability of claims 58-60 is withdrawn in view of the newly discovered printing press reference(s). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-9, 19, 20, 22, 23, 29, 32, 34, 35, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grupe (US 2,333,172) in view of Reed et al (US 6,026,748) and Smith et al (US 3,081, 191). Reed et al and Smith et al will be referred to as Reed and Smith hereinafter.

Grupe provides coating apparatus in the form of a printing press comprising a fountain of coating material defined between an applicator (40) and metering bar or doctoring device (84), the applicator (40) comprising a convex exterior surface capable of receiving a feed in sheet or web (10); and the metering bar or doctor device (84) positioned against said convex exterior surface of said applicator to meter a predetermined amount of coating composition to said convex exterior surface of said applicator for transfer from said convex exterior surface of said applicator to a sheet or web transported to said applicator via entrance area (28), said metering bar forming a nip with said convex exterior surface of said applicator and exerting a predetermined force against said applicator, said predetermined amount of coating composition being determined, in part, by said force of said metering bar and a force present at said nip. Grupe is silent concerning 1) a conveyor for feeding a sheet or web to the applicator and 2) the

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fountain being formed by a metering bar of the type including fixed arcuate end positioned against the convex exterior surface of the applicator. However, it was known in the art, at the time the invention was made, to provide a conveyor in the form of rolls (60) to feed or transfer a sheet to the applicator as evidenced by Reed. It would have been obvious to one of ordinary skill in the art to provide transfer rollers as taught by Reed in the Grupe apparatus to effectively feed or transport sequentially fed sheets to the applicator without the need of an operator. In addition, it was known in art, at the time the invention was made, to provide a fountain defined between an applicator roller and a metering bar in the form of a shoe including a fixed arcuate end positioned against the convex exterior surface of the applicator in order to effect more uniform metering of a coating for application to a substrate as evidenced by Smith (col. 3, lines 8-36). In light of the teachings of Smith, it would have been obvious to one of ordinary skill in the art to provide in the apparatus defined by the combination, a fountain defined by the applicator roller and metering bar of the shoe form type including a fixed arcuate end positioned against the convex exterior surface of the applicator in order to effect more uniform metering of coating for application to the sheet or web.

With respect to claim 2, none of the prior art sets forth the hardness of the applicator roller but it would have been obvious to one of ordinary skill in the art to determine the appropriate hardness and/or softness of the applicator roller via choice of material used in accordance with the substrate or article being coated.

With respect to claim 3, the apparatus as defined by the combination above would be capable of coating sheets of different dimensions (width and thickness).

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With respect to claims 4 and 5, even though Smith does not set forth a radius dimension for the end of the metering bar, it would be within the purview of one skilled in the art to have determined, via routine experimentation, the appropriate dimension of the [arcuate] end of the metering bar so as to effect uniform metering of the applicator roller yet save manufacturing costs and prolong the lifetime of the bar.

With respect to claims 6 and 7, none of the above prior art suggests a desired pressing force of the metering bar against the applicator. However, it would have been obvious to one of ordinary skill in the art to determine the appropriate metering pressing force to apply to the applicator in accordance with the coating material used and the desired thickness of coating material to be deposited on the sheet. Such a determination of metering pressure would be determined via routine experimentation.

With respect to claim 8, none of the prior art suggests that the coating apparatus can be configured for coating rolls of tape, however, because a roll of tape can be made to be small in width to extent of being planar in form when placed on a side, the apparatus as defined by the combination above would be able to coat said roll of tape when placed in a side feed position into the apparatus.

With respect to claim 9, the apparatus as defined by the combination above would provide for said applicator comprising a roller with said metering bar having the claimed features positioned against said roller since Grupe establishes placement of the metering or doctoring device against the roller as evidenced by pg. 2, lines 44-47.

With respect to claim 19, the apparatus as defined by the combination above would provide for the instantly claimed coating station and Reed would provide support the addition of

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a post or second drying or solidifying or curing station (col. 3, lines 19+). It would have been obvious to one of ordinary skill in the art to incorporate at least one post drying/solidifying/curing station following coating of the sheet in order to dry or cure or harden radiation curable inks used in the apparatus.

With respect to claim 20, the apparatus as defined by the combination above would provide for said applicator comprising a roller with said metering bar having the claimed features positioned against said roller since Grupe establishes placement of the metering or doctoring device against the roller as evidenced by pg. 2, lines 44-47.

With respect to claims 22, 23, and 29, the apparatus as defined by the combination above provides for transfer rollers to transport the sheet through the apparatus.

With respect to claims 32, 34, and 35, Reed provides for curing/drying of ink via infrared radiation (col. 3, lines 22+).

With respect to claim 57, the apparatus as defined by the combination would include the instantly claimed features.

Claims 24, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grupe (US 2,333,172), Reed et al (US 6,026,748), and Smith et al (US 3,081, 191) as applied to claim 19 above, and further in view of Gibbons (US 2,442,407).

The teachings of Grupe, Reed, and Smith have been mentioned above but none teach or suggest a first and second endless belt to transport coated sheeting to the post station or drier. However, it was known art, at the time the invention was made to provide endless conveyor belts to transport sheeting through a printing press to/through the drier/curing station as evidenced by

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Gibbons (col. 2, lines 9-36). It would have been obvious to one of ordinary skill in the art to provide endless belt type conveyors in the apparatus as defined by the combination above as another form of transportation of the sheets through drying/curing area.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grupe (US 2,333,172), Reed et al (US 6,026,748), and Smith et al (US 3,081, 191) as applied to claims 19/32 above, and further in view of Kirk Othmer.

The teachings of Grupe, Reed, and Smith have been mentioned above but none teach or suggest another form of radiation such as one of UV or electron beam radiation source to cure a coating material. However, the use of a radiation source to cure a coating material is well established and conventional in the art as evidenced by Kirk Othmer (see pages 832-834). It would have been obvious to one of ordinary skill in the art to utilize any appropriate source of radiation including electron beam as taught by Kirk Othmer in the apparatus as defined by the combination above when said appropriate source of radiation is required to cure a given coating composition on the sheet.

Claims 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grupe (US 2,333,172) in view of Reed et al (US 6,026,748).

Grupe provides coating apparatus in the form of a printing press comprising a first upper fountain of coating material defined between an applicator (40) and metering bar or doctoring device (84), the applicator (40) comprising a convex exterior surface capable of receiving a feed in sheet or web (10); and the metering bar or doctor device (84) positioned against said convex

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exterior surface of said applicator to meter a predetermined amount of coating composition to said convex exterior surface of said applicator for transfer from said convex exterior surface of said applicator to a sheet or web transported to said applicator via entrance area (28), and a second lower fountain of coating material defined between an applicator (44) and metering bar or doctoring device (64), the applicator (44) comprising a convex exterior surface capable of receiving the fed sheet or web (10); and the metering bar or doctor device (64) positioned against said convex exterior surface of said applicator to meter a predetermined amount of coating composition to said convex exterior surface of said applicator for transfer from said convex exterior surface of said applicator to said sheet or web transported to said applicators via entrance area (28). Grupe is silent concerning 1) a conveyor for feeding the sheet or web to the applicators and 2) a post or second station for drying or solidifying or curing the coating material. However, it was known in the art, at the time the invention was made, to provide a conveyor in the form of rolls (60) to feed or transfer a sheet to the applicator as evidenced by Reed. It would have been obvious to one of ordinary skill in the art to provide transfer rollers as taught by Reed in the Grupe apparatus to effectively feed or transport sequentially fed sheets to the applicators without the need of an operator. In addition, it was known in art, at the time the invention was made, to provide for a post or second drying or solidifying or curing station following coating/printing as evidenced by Reed (col. 3, lines 19+). It would have been obvious to one of ordinary skill in the art to incorporate at least one post drying/solidifying/curing station as taught by Reed following coating/printing of the sheet in order to dry or cure or harden radiation curable inks used in the apparatus.

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With respect to claims 59 and 60, the apparatus as defined by the combination above would provide for said applicators (i.e., rollers) positioned opposite one another (see Fig. 1 of Grupe).

Allowable Subject Matter

Claims 10-18, 21, 25-28, and 61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura Edwards whose telephone number is (571) 272-1227. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura Edwards/
Primary Examiner
Art Unit 1792

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March 15, 2009